BASIC-52 INSTRUCTION SET

Command Function
RUN - Execute a program
CONT - Continue after a stop or Control-C
LIST - List program to the console device
LIST# - List program to serial printer port (P1.7)
NEW - Erase the program stored in RAM
NULL - Set null count after carriage return/line feed
RAM - Evoke RAM mode, current program in read/write memory
ROM - Evoke ROM mode, current program in ROM/ EPROM
XFER - Transfer a program from ROM/EPROM to RAM
PROG – Saves the currently selected program to EPROM
PROG1 – Saves baud rate and sends sign-on message on reset
PROG2 – Saves baud rate and enters run mode upon power up or reset
PROG3 – Saves the baud rate and MTOP clears memory up to MTOP and sends the sign-on message
PROG4 - Saves the baud rate and MTOP clears memory up to MTOP and enters run mode upon power up or reset

Statement Function
ASC() - Returns integer of ASCII character
BAUD - Set data-transmission rate for line-printer port
CALL - Call assembly-language program
CHR() - Returns ASCII character of integer
CLEAR - Clear variables, interrupts, and strings
CLEARS - Clear stacks
CLEARI - Clear interrupts
CLOCK1 - Enable real-time clock
CLOCK0 - Disable real-time clock
DATA - Data to be read by READ statement
READ - Read data in DATA statement
RESTORE - Restore READ pointer
DIM - Allocate memory for arrayed variables
DO - Set up loop for WHILE or UNTIL
UNTIL - Test DO loop condition (loop if false)
WHILE - Test DO loop condition (loop if true)
END - Terminate program execution
FOR-TO-{STEP} - Set up FOR...NEXT loop
NEXT - Test FOR...NEXT loop condition
GOSUB - Execute subroutine
RETURN - Return from subroutine
GOTO - GOTO program line number
ON GOTO - Conditional GOTO
ON GOSUB - Conditional GOSUB
IF-THEN-{ELSE} - Conditional test
INPUT - Input a string or variable
LET - Assign a variable or string a value (LET is optional)
ONERR - ONERR or GOTO line number
ONTIME - Generate an interrupt when time is equal to or greater than ONTIME argument; line number is after comma
ONEX1 - GOSUB to line number following ONEX1/ when INT1 pin is pulled low
PRINT - Print variables, strings, or literals, P. is shorthand for print
PRINT# - Print to serial printer port (P1.7)
PH0. - Print hexadecimal mode with zero suppression
PH1. - Print hexadecimal mode with no zero suppression
PH0.# - PH0.# to serial printer port (P1.7)
PH1.# - PH1.# to serial printer port (P1.7)
PUSH - Push expressions on argument stack
POP - Pop argument stack to variables
PWM - Pulse-width modulation
REM - Remark
RETI - Return from interrupt
STOP - Break program execution
STRING - Allocate memory for strings
UI1 - Evoke user console input routine
UI0 - Evoke BASIC console input routine
UO1 - Evoke user console output routine
UO0 - Evoke BASIC console output routine

Operator Function
CBY( ) - Read program memory
DBY( ) - Read/assign internal data memory
XBY( ) - Read/assign external data memory
GET - Read console
IE - Read/assign IE register
IP - Read/assign IP register
PORT1 - Read/assign I/O port 1 (P1)
PCON - Read/assign PCON register
RCAP2 - Read/assign RCAP2 (RCAP2H:RCAP2L)
T2CON - Read/assign T2CON register
TCON - Read/assign TCON register
TMOD - Read/assign TMOD register
TIME - Read/assign real-time clock
TIMER0 - Read/assign TIMER0 (TH0:TL0)
TIMER1 - Read/assign TIMER1 (TH1:TL1)
TIMER2 - Read/assign TIMER2 (TH2:TL2)
+ - Addition
/ - Division
****** - Exponentiation
***** - Multiplication
- - Subtraction
.AND. - Logical AND
.OR. - Logical OR
.XOR. - Logical exclusive OR

Stored Constant
PI - 3.1415926

Operators-Single Operand
ABS( ) - Absolute value
NOT( ) - One's complement
INT( ) - Integer
SGN( ) - Sign
SQR( ) - Square root
RND - Random number
LOG( ) - Natural log
EXP( ) - "e" (2.7182818) to the X
SIN( ) - Returns the sine of argument
COS( ) - Returns the cosine of argument
TAN( ) - Returns the tangent of argument
ATN( ) - Returns the arctangent of argument